REMARKS

A reconsideration is respectfully requested of Claims 2, 3, 5, 9, 10, 15, 16, 22-24 and 26, wherein Claims 9, 15-16, and 22 have been amended.

Claim 9 has been amended to address the objection indicated in paragraph 3 of the Official Action. In particular, Claim 9 has been amended to more precisely that the cooling air is additionally cooled before it is used for cooling purposes in the high temperature part of the gas turbine. This precooling is in addition to the back-cooling, as defined in independent Claim 24. Accordingly, withdrawal of the objection to Claim 9 is respectfully requested.

Claims 2, 3, 5, 9, 10, 15, 16, 22-24 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,253,554 to *Kobayashi et al.* in view of U.S. Patent No. 5,611,197 to *Bunker* and U.S. Patent 5,581,996 to *Koch et al.*

In the Official Action, the Examiner concedes that *Kobayashi et al.* do not teach a cooler in the second cooling line. However, the Examiner seeks to rely on *Bunker* for teaching this feature. The Examiner concludes that it would have been obvious to one having ordinary skill in the art to employ a cooler in the return line according to *Bunker* in a cooling circuit of a gas turbine as taught by *Kobayashi et al.* However, Applicants submit that one having ordinary skill in the art would not combine the documents as indicated by the Examiner.

In particular, the primary object of *Kobayashi et al.* is to provide a gas turbine plant capable of relatively reducing a flow rate of fuel so as to improve a plant heat efficiency without giving any influence to other constituent equipments when using the gas turbine

plant itself as a heating source for heating a fuel. See Column 2, lines 24-30 of *Kobayashi et al.* *Kobayashi et al.* provides a heat exchange section within a high pressure air supply system for heating the fuel supplied to the gas turbine. This exchange section 16 is provided in the cooling air line running from the compressor to the high temperature turbine section of the gas turbine. Therefore, the cooling air is cooled prior to being used as a cooling fluid. See column 16, lines 15-24 of *Kobayashi et al.*, where it is stated that the fuel F from a fuel section 12 is heated by the high pressure air from the air compressor 8, and after the fuel F is heated, the high temperature sections 31A and 31B of the gas turbine 10 are cooled by the high pressure air whose temperature becomes low.

The high temperature sections 31A and 31B of the gas turbine, which are cooled by the high pressure air, can be different parts of the turbine. As such, the high temperature section 31A and 31B are distributed along the axis of the gas turbine. The cooling air is directly fed back to the compressor after having cooled down the high temperature section 31A and 31B. However, the high pressure air recovery system 32 can recover the overall quantity or a part of the high pressure air, or the high pressure air can be completely injected into the main hot gas stream.

Bunker on the other hand teaches a closed-circuit air cooled turbine. The closed-circuit approach requires that the high pressure cooling air almost completely be returned to the compressor after cooling the high temperature sections. The cooling air is not injected into the main hot gas stream in a film cooling process, or the like. This closed-circuit approach is chosen to avoid reductions in engine efficiency. See column 1, lines 24-35 of *Bunker*.

As such, the technical solutions of *Kobayashi et al.* and *Bunker* would not be combined to obtain the features of the present invention. In *Kobayashi et al.*, the high pressure air is cooled down prior to cooling the high temperature components of the turbine. In contrast, in *Bunker* the high pressure air is cooled after having cooled the high temperature components of the turbine. Accordingly, neither *Kobayashi et al.* nor *Bunker* would teach the feature of a cooler located in the second cooling line as defined in independent Claim 26. Nor do the disclosed documents teach a method of cooling a gas turbine system wherein the cooling air is recooled after it has cooled the respective thermally loaded components of the system and before it is fed back to the compressor, as described in independent Claim 24.

For at least the foregoing reasons, it is submitted that the apparatus and method of independent Claims 24 and 26, and the claims depending therefrom, are patentably distinguishable over the applied documents. Accordingly, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should any questions arise in connection with this application, or should the Examiner believe a telephone conference would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contact at the number indicated below.

Respectfully submitted,

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